

CLAIMS

SvA

1. Injection-moulding device for injection moulding of plastic objects, comprising a mould which defines a mould cavity, in which mould is provided a flow channel for the at least partially liquid plastic, which 5 flow channel extends through a manifold and a number of nozzles connected to the manifold, wherein the flow channel contains a number of transverse separating surfaces between structural components, and at least one transverse separating surface is bridged by a sealing 10 element in the flow channel, characterized in that the sealing element is provided clampingly on the structural components.

2. Device as claimed in claim 1, characterized in that the sealing element is provided with shrink fit 15 on the structural components.

3. Device as claimed in claim 2, characterized in that the sealing element is provided on the structural components with an overmeasure in the dimension in axial direction.

20 4. Device as claimed in any of the claims 1-3, characterized in that the sealing element is formed by a cylindrical bush, wherein the ratio of the diameter of the flow channel, wall thickness of the bush and height of the bush equals 22:2:10.

25 5. Device as claimed in any of the claims 1-4, characterized in that the structural components are provided with a corresponding recess for the sealing element for housing of the sealing element.

6. Device as claimed in claim 5, characterized 30 in that the recess has a form and dimension such that the passage of the flow channel over the seal remains constant.

7. Device as claimed in any of the claims 1-6, characterized in that the sealing element is manufactured 35 from a metal alloy, for instance a high chromium content alloy.

8. Device as claimed in any of the claims 1-7,
characterized in that an additional seal is provided
between the structural components which is formed by
self-sealing sealing rings which are arranged
5 diametrically relative to the flow channel in the
transverse separating plane.

9. Device as claimed in any of the claims 1-8,
characterized in that the structural components defining
the transverse separating surface are formed by the
10 manifold and a nozzle.

10. Device as claimed in claim 9, characterized
in that the nozzle is mounted on the manifold by means of
a number of, preferably two, and more preferably four,
independently controllable connecting elements.

15 11. Device as claimed in claim 10,
characterized in that a connecting element is formed by a
nut and bolt assembly, wherein the nut is preferably a
clamp plate.

12. Device as claimed in any of the claims
20 9-11, characterized in that an adaptor nozzle is provided
between the manifold and a nozzle, wherein an angular
displacement is possible between the manifold and the
adaptor nozzle.

13. Device as claimed in any of the claims 1-8,
25 characterized in that the structural components defining
the transverse separating surface are formed by nozzle
parts.

14. Device as claimed in claim 13,
characterized in that two semi-circular clamping plates
30 are provided round the transverse separating surface for
enclosing the outer periphery of the nozzles.

15. Device as claimed in claim 14,
characterized in that the outer periphery of the nozzles
is provided with a stepped portion and the clamping
35 plates with a corresponding recess.

16. Device as claimed in any of the claims
1-15, characterized in that the nozzle on the mould
cavity runs out onto a gate 13, wherein the gate

comprises an assembly displaceable in longitudinal direction.

17. Device as claimed in claim 16,
characterized in that the sleeve extends over an
5 expansion space in the gate.

18. Device as claimed in any of the claims
1-17, characterized in that wiring in and on the mould is
coated with Kapton and enclosed in a metal cage.

19. Device as claimed in any of the claims
10 1-18, characterized in that the device is provided with
dual heating elements.

20. Device as claimed in any of the claims
1-19, characterized in that the device is provided with
dual thermocouples.

15 21. Device as claimed in any of the claims
1-20, characterized in that the device comprises a
control apparatus connected to a computer.